



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

5014335
Ship

D350-591-311
Job Sheet 156371



Part No: D350-591-311

Job Qty: 2 ea

Part Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 9/30/17

Job Tracking No:

Due Date: 10/31/17

Created By: Mario Poulin

Type: Stock

Description:

Customer: Airbus Helicopters - Marignane (CEURO24)

Aeroport International De Marseille Cedex Marignane Marseille, , 13725 France ph:+33 4 42 85 85 85 fx:+33 4 42 85 83 00.

Note: DWG REV B IPP Rev:A 04.03.22 New issue KJ/RF IPP Rev:B 07-06-09 Added D3272-1 JLM IPP C returned to CHG001 for Eurocopter, ref NCR08-082 LL verified by:EC IF verified by:EC

Ship Via:

Status: Stock

Part: **D350-591-311 B166371**

Created: 9/30/17 12:38 PM DART.MICHAUD-
FEBRILLE.VICTORIA



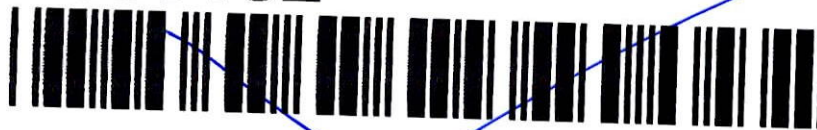
Serial No: **S000152**

Printed By: Goldston, Justin 10/2/17 10:45 AM

Bill of Materials

Part/Part Name	Part Note	
D350-591-311 Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible	DWG REV B IPP Rev:A 04.03.22 New issue KJ/RF Added D3272-1 JLM IPP C returned to CHG001 f NCR08-082 LL verified by:EC IPP Rev:D fixe roul 10.04.28 verified by:EC	
AN3-35A Bolt		
AN4-13A Bolt		0.000
AN5-36A Bolt		0.000
D2230-3 Mounting Lug	DWG REV G IPP D 00.05.18 Added inspection level 8, and removed P/O for powder coat EC IPP REV :E NEW FOLIO # 10-05-25 JLM VERIFIED BY:EC	0.000
D2618 Bushing	DWG REV B1 IPP Rev:F Re-format 05-11-22 JLM	0.000
D2856-400-720 Abrasion Strip 4" X 7.20"	DWG REV A IPP Rev:A 10.11.02 as per revA DD verf:EC	0.000
D3065-041 Step Leg Assembly	DWG REV B IPP Rev: C 02.11.01 Incorporated D3066-1 IPP KJ/RF	0.000
D3066-1 Spacer	DWG REV B IPP: C 02.11.01 Incorporated D3066-1 IPP KJ/RF IPP Rev:B Now M6061-T6 06-06-23 JLM	0.000
D3067-1 End Plate	DWG REV A IPP: 03.01.21 Remove step 6 (Deburr) KJ IPP Rev:B Now on Water jet 06-06-16 JLM	0.000
D3067-1 End Plate	DWG REV A IPP: 03.01.21 Remove step 6 (Deburr) KJ IPP Rev:B Now on Water jet 06-06-16 JLM	0.000
D3219-1 Plate	DWG REV B IPP A 04.04.19 New issue KJ/JLM ESR B 06.05.25 Waterjet EC	0.000
D3235-1 Mounting Lug	DWG REV A IPP A 04.04.19 New issue KJ/JLM	0.000
D3272-1 Step	DWG REV B IPP Rev:A New Issue 07-06-09 JLM	0.000
D3278-041 Support Assembly	DWG REV C IPP: A 04.04.19 New issue KJ/JLM IPP B 07.08.21 Chg rivet per PAR185 EC Verified by: JLM	0.000
MS20600-AD4W4 Rivet		0.000
MS21042L3 Nut	DWG REV A	0.000
		0.000

DART
AEROSPACE
S000152



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

PART NO: D350-591-311 B166371
Revision:
Operation: Start up Operation
Quantity: 2
Change No:

Mfg Date: 09/30/17
Job No:

DART
AEROSPACE
S014335



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Heli - Access - Step LH - High Gear, Long Step, Aerazur
Float Compatible

PART NO: D350-591-311
Revision:
Operation: HandFinish
Change No:

Mfg Date: 11/27/17
Job No: 166371

MS21042L4

Nut

MS21042L5

Nut

NAS1149D0363J

Washer

NAS1149D0463J

Washer

NAS1149D0563J

Washer

0.000

0.000

0.000

0.000

Job Routing

Op No	Operation	Qty	Due Date	Standard		Workcenter/Supplier	
				Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time
90	Start up Operation	2 Ea	10/30/17	0.00	0.00	Start up container	
100	DC	2 pcs	10/30/17	0.00	0.00	DC	
180	Large Fab	2 pcs	10/30/17	0.00	2.00	Large Fab 2	
220	Powdercoat	2 pcs	10/30/17	0.00	0.58	Powdercoat1	
230	HandFinish	2 pcs	10/31/17	0.00	0.37	HandFinish3	
240	QC	2 pcs	10/31/17	0.00	0.00	QC3	
250	Packaging	2 pcs	10/31/17	0.00	0.00	Packaging1	
260	QC	2 pcs	10/31/17	0.00	0.00	QC4	
270	Packaging	2 pcs	10/31/17	0.00	0.00	Packaging3	
280	QC21-FG	2 Ea	10/31/17	0.00	0.00	QC21	

Part Op 100 - Photocopy bluefile and type labels as per PPP D350-591-311 CHG001

Descriptions: 180 - 1-Assemble Leg Assembly as per Dwg D3272.

220 - START TIME: 8:00 FINISH TIME: 4:30 - 2017/12/05

270 - Identify and pack for shipping as per PPPD350-591-311 Location : FG084

17138467.

wing walk 17138423.

DEC 08 2017

Job BOM

Part / Item	Component Name	Quantity	Operation	Special Comments
MS20600-AD4W4	Rivet	32 Ea (16 ea)	180-Large Fab	
AN3-35A	Bolt	4 Ea (2 ea)	250-Packaging	
AN4-13A	Bolt	16 Ea (8 ea)	250-Packaging	
AN5-36A	Bolt	4 Ea (2 ea)	250-Packaging	
D2230-3	Mounting Lug	8 Ea (4 ea)	250-Packaging	
D2618	Bushing	4 Ea (2 ea)	250-Packaging	
D2856-400-720	Abrasion Strip 4" X 7.20"	4 Ea (2 ea)	250-Packaging	
D3278-041	Support Assembly	2 Ea (1 ea)	250-Packaging	
MS21042L3	Nut	4 Ea (2 ea)	250-Packaging	
MS21042L4	Nut	16 Ea (8 ea)	250-Packaging	
MS21042L5	Nut	4 Ea (2 ea)	250-Packaging	
NAS1149D0363J	Washer	8 Ea (4 ea)	250-Packaging	
NAS1149D0463J	Washer	32 Ea (16 ea)	250-Packaging	
NAS1149D0563J	Washer	8 Ea (4 ea)	250-Packaging	
D3067-1	End Plate	2 Ea (1 ea)	250-Packaging	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
180-Large Fab	MS20600-AD4W4	32	0	0	0
250-Packaging	AN3-35A 5018860	4	0	0	0
	AN4-13A 5018858	16	0	0	0
	AN5-36A 5018862	4	0	0	0
	D2230-3 5018851	8	0	0	0
	D2618 5018855	4	0	0	0
	D2856-400-720 5018856	4	0	0	0
	D3067-1	2	0	0	0
	D3278-041 5018847	2	0	0	0
	MS21042L3 5018863	4	0	0	0
	MS21042L4 5018861	16	0	0	0
	MS21042L5 5018865	4	0	0	0
	NAS1149D0363J 5018867	8	0	0	0
	NAS1149D0463J 5018868	32	0	0	0

D3235-1

Part Specifications

Specifications could not be found.

Plex 10/1/17 1:16 PM Dart.Renwick.Jennifer

270 - 1x DSI9410-011

5014470

Work Order Summary

Thursday, September 28, 2017 9:21:53 AM

Page 1 of 2

Criteria : Work Order ID: 166371 Item ID: D350-591-311 Product Family LARGE FAB
 Work Order Start Dates 9/18/2017 to 9/18/2017 11:59:59 PM Work Order Required Dates 9/28/2017 to 9/28/2017 11:59:59 PM
 All References
 Work Order Status Released

Work Order ID	166371	Required Qty	2.0000	Status Code	Released
Item ID	D350-591-311	Accepted Qty	0.0000	Scrap Qty	0.0000
Item Name	Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible				
Current Acct Value	\$703.537				
Start Date	9/18/2017	Required Date	9/28/2017	Completed Date	
Standard	** Actual **		** Acct. Value **	** Variance **	** Variance % **
Direct Costs	Total	Each	Each	Each	Each
Material	\$56.924	\$0.000	\$151.003	\$151.003	100.00%
Labor	\$238.178	\$0.000	\$169.028	\$169.028	100.00%
Outplant	\$0.000	\$0.000	\$0.002	\$0.002	100.00%
Variable Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Fixed Burden	\$509.288	\$0.000	\$383.504	\$383.504	100.00%
Material Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
** Total **	\$804.390	\$0.000	\$703.537	\$703.537	

Item ID/Item Name	Required Qty	Issue Code	Issue Date	Issued Qty	Cost Amount
D3065-041 Step Leg Assembly	2.0000		9/28/2017	1.0000	\$66.044
	2.0000		9/21/2017	1.0000	\$72.082
D3066-1 Spacer	4.0000		9/28/2017	2.0000	\$8.709
	4.0000		9/21/2017	2.0000	\$8.709
D3067-1 End Plate	2.0000		9/28/2017	1.0000	\$2.531
	2.0000		9/21/2017	1.0000	\$2.531
D3219-1 Plate	4.0000		9/19/2017	4.0000	\$14.043
D3272-1 Step	2.0000		9/28/2017	2.0000	\$105.648
Total Matl Amts:					\$280.296

Work Center HandFinish

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
LECO02		9/20/2017										
140			0.00	0.00	0.65	0.22	3.00	\$0.000	\$4.694	\$11.716	\$0.000	\$16.409

Thursday, September 28, 2017 9:21:53 AM

Work Order Summary

Page 1 of 2

9/22/2017												
210			0.00	0.00	0.29	0.10	3.00	\$0.000	\$2.131	\$5.319	\$0.000	\$7.450
Total:			0.00	0.00	0.94	0.31	6.00	\$0.000	\$6.824	\$17.034	\$0.000	\$23.859

Work Center Large Fab

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
LABO01												
9/19/2017												
110			0.00	0.00	2.14	2.14	1.00	\$0.000	\$45.909	\$93.185	\$0.000	\$139.094
lu01												
9/19/2017												
110			0.00	0.00	2.93	2.93	1.00	\$0.000	\$63.012	\$127.900	\$0.000	\$190.912
9/21/2017												
180			0.00	0.00	2.61	2.61	1.00	\$0.000	\$56.186	\$114.044	\$0.000	\$170.230
Total:			0.00	0.00	7.68	7.68	3.00	\$0.000	\$165.107	\$335.129	\$0.000	\$500.236

Airbus* & Rush

Work Order ID 166371

166371

Page 1

Monday, September 18, 2017 4:04:45 PM

Item ID: D350-591-311 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible
Start Date: 9/18/2017 Start Qty: 2.00 *2* Cust Item ID:
Required Date: 9/28/2017 Req'd Qty: 2.00 *2* Customer:
Reference: *S/O 13/008*

Approvals: Process Plan: *W* Date: *SEP 18 2017* Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3272	Rev B

100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile and type labels as per PPP D350-591-311 CHG001								

110	Weld per dwg A/R Aluminum rod Batch:	0.00							
110	Large Fab								
Large Fab	Memo	0.64							
Large Fab	1-Bevel end for welding FWD ONLY								
	2-Weld Support using Jig DT8719, weld Fwd End Plate as per QSI 004 & Dwg D3272								
	A/RAluminum Rod <i>M136158</i>								
	3-Grind End Plate flush								

X1 *① SL 2017-9-19*
P70

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☒</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☒	Composite ☐	Supplier ☐																																																																																																																														
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Date : <u>17-09-19</u>	Step #: <u>110</u>	QTY Effective : <u>1</u>		MRB (QSI042) Approval																																																																																																																																														
Description Work Order Deviation		Disposition		<u>PD 17-09-19</u> Completed By <u>S.L.</u> Lead hand / Supervisor Approval Verification SEP 20 2017 DAS 24 9-89 QC / QA Coordinator Approval <u>PD 17-09-19</u>																																																																																																																																														
<u>Support D3219-1 crack during welding.</u> <u>Z.C. too much heat apply to</u> <u>the support</u>		<u>Scrap destroy no replace.</u>																																																																																																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Root Cause</th> <th colspan="4" style="text-align: left;">FAULT CATEGORY</th> </tr> </thead> <tbody> <tr> <td style="width:10%;">Environment</td> <td style="width:10%;">☐</td> <td style="width:10%;">No Re-verification</td> <td style="width:10%;">☐</td> <td style="width:10%;">Pressure/Forced</td> <td style="width:10%;">☐</td> <td style="width:10%;">Temperature/Cure</td> <td style="width:10%;">☐</td> <td style="width:10%;">Power Loss/Surge</td> <td style="width:10%;">☐</td> <td style="width:10%;">Positioned Wrong</td> <td style="width:10%;">☐</td> </tr> <tr> <td>Design</td> <td>☒</td> <td>Operator</td> <td>☐</td> <td>Bending</td> <td>☐</td> <td>Set-up</td> <td>☐</td> <td>Folio/Program</td> <td>☐</td> <td>Outside Dimensions</td> <td>☐</td> </tr> <tr> <td>Doc/Data</td> <td>☐</td> <td>Offset/Setup</td> <td>☐</td> <td>Centre Not Concentric</td> <td>☐</td> <td>BOM/Route</td> <td>☐</td> <td>Grain</td> <td>☐</td> <td>Over/Under tolerance</td> <td>☐</td> </tr> <tr> <td>Equip/Tooling</td> <td>☐</td> <td>Supplier</td> <td>☒</td> <td>Cracks</td> <td>☐</td> <td>Broken/Damage/Defect</td> <td>☐</td> <td>Weld</td> <td>☒</td> <td>Part Incorrect</td> <td>☐</td> </tr> <tr> <td>Handling/Pre</td> <td>☐</td> <td>Training</td> <td>☐</td> <td>Crimp/Kink/Ripple/Wave</td> <td>☐</td> <td>Inspection Incomplete/Unqualified</td> <td>☐</td> <td>Wrong Stock Pulled</td> <td>☐</td> <td>Part Lost/Missing</td> <td>☐</td> </tr> <tr> <td>Material</td> <td>☐</td> <td>Use for Testing</td> <td>☐</td> <td>Cuffs</td> <td>☐</td> <td>Contamination</td> <td>☐</td> <td>Out of Sequence</td> <td>☐</td> <td>Part Moved</td> <td>☐</td> </tr> <tr> <td>Internal Transport</td> <td>☐</td> <td>Poor Information</td> <td>☐</td> <td>Crushing</td> <td>☐</td> <td>Countersink</td> <td>☐</td> <td>Off-set</td> <td>☐</td> <td>Drawing</td> <td>☐</td> </tr> <tr> <td>Tribal Knowledge</td> <td>☐</td> <td>Rushing</td> <td>☐</td> <td>Heat Treat</td> <td>☐</td> <td>Cut Too Short</td> <td>☐</td> <td>Mislabeled</td> <td>☐</td> <td>Finish</td> <td>☐</td> </tr> <tr> <td>LOA</td> <td>☐</td> <td>Product Improvement</td> <td>☐</td> <td>Wave/Twist in Tube</td> <td>☐</td> <td>Instructions Incomplete/Unclear</td> <td>☐</td> <td>Fit/Function</td> <td>☐</td> <td>Misread</td> <td>☐</td> </tr> <tr> <td>Substation</td> <td>☐</td> <td>Process Improvement</td> <td>☐</td> <td>Marks/Chatter</td> <td>☐</td> <td>Drill Holes</td> <td>☐</td> <td>Misaligned/off center</td> <td>☐</td> <td>Turning Sequence</td> <td>☐</td> </tr> <tr> <td>Past Expiry Date</td> <td>☐</td> <td>Manufacturing Process</td> <td>☐</td> <td colspan="8" rowspan="2" style="vertical-align: top;">OTHER : _____</td> </tr> <tr> <td>Misidentified</td> <td>☐</td> <td>Past Due</td> <td>☐</td> </tr> </tbody> </table>					Root Cause		FAULT CATEGORY				Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐	Design	☒	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐	Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐	Equip/Tooling	☐	Supplier	☒	Cracks	☐	Broken/Damage/Defect	☐	Weld	☒	Part Incorrect	☐	Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐	Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐	Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐	Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐	LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐	Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐	Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____								Misidentified	☐	Past Due	☐
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Work Order ID 166371***166371***

Page 2

Monday, September 18, 2017 4:04:45 PM

Item ID: D350-591-311

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 9/28/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC9- Inspect visual per QSI004- Fusion Welds

0.00

120

QC

Memo

0.00

Quality Control

1

SEP 20 2017

DAS
24
9-89

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

1

SEP 20 2017

DAS
24
9-89

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.40

Hand Finishing

①

Ø

2017-09-20

JSL

BEB.

Work Order ID 166371

Monday, September 18, 2017 4:04:45 PM

166371

Page 3

Item ID: D350-591-311

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 9/28/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

QC7-Inspect Chemical Conversion Coat

0.00

150

QC

Memo

0.02

Quality Control

/ SEP 20 2017 DAS 24 9-89

180

Weld per dwg A/R Aluminum rod Batch: _____

0.00

180

Large Fab

Large Fab

Memo

0.56

Large Fab

1-Assemble Leg Assembly as per Dwg D3272.

2-Leave one rivet out until welding is complete.

3-Bevel Aft end for welding

4-Inspect for foreign object as per QSI 024

5-Weld Aft End Plate as per QSI 004 & Dwg D3272
A/R Aluminum Rod M137078

6-Grind End Plate flush

7-Install last rivet as per Dwg.

x1 S.L 2017-9-21

Work Order ID 166371***166371***

Page 4

Monday, September 18, 2017 4:04:45 PM

Item ID: D350-591-311**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Stop *NS2*****Item Name:** Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible**Start Date:** 9/18/2017 **Start Qty:** 2.00 ***2*****Cust Item ID:****Required Date:** 9/28/2017 **Req'd Qty:** 2.00 ***2*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00				1	SEP 22 2017		DAS 24 9-89
200 *200* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.04				1	SEP 22 2017		DAS 24 9-89
210 *210* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.14				①	Ø	2017-09-22	JLC

Work Order ID 166371

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166371

Page 5

Item ID: D350-591-311**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible**Start Date:** 9/18/2017 **Start Qty:** 2.00***2*****Cust Item ID:****Required Date:** 9/28/2017 **Req'd Qty:** 2.00***2*****Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

220

Powdercoat

Memo

0.34

Powder Coating

START TIME: _____

OVEN TEMPERATURE: _____

FINISH TIME: _____

230

Wing Walk as per dwg QSI005 4.4 Batch _____

0.00

230

HandFinish

Memo

0.38

Hand Finishing

240

QC3- Inspect Part Finish

0.00

240

QC

Memo

0.02

Quality Control

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1 66371

Page 6

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Acrazur Float Compatible

Start Date: 9/18/2017 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 9/28/2017 **Req'd Qty:** 2.00 ***?***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

250

Pick Kit

0.00

250

Packaging

Memo

0.02

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.06

Quality Control

270

Identify as per dwg & Stock Location: _____

0.00

270

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD350-591-311
Location : FG084

Work Order ID 166371***166371***

Page 7

Monday, September 18, 2017 4:04:45 PM

Item ID: D350-591-311**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible**Start Date:** 9/18/2017 **Start Qty:** 2.00***2*****Cust Item ID:****Required Date:** 9/28/2017 **Req'd Qty:** 2.00***2*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start*****NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Memo

0.20

Quality Control

Picklist Print

Page 1

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Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A04.03.22New issue KJ/RF
IPP Rev:B 07-06-09 Added D3272-1 JLM
IPP C returned to CHG001 for Eurocopter, ref NCR08-082 LL verified
by:EC IPP Rev:D fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN3-35A

Purchased

No

250

Each

62.0000

2

4

AN3-35A******

Bolt

LocationLoc QtyLoc Code

FG

10

122800

10

ST348

52

M138170

52

AN4-13A

Purchased

No

250

Each

114.0000

8

16

AN4-13A******

Bolt

LocationLoc QtyLoc Code

FG

20

122808

20

GA

9

m135470

9

ST344

85

m138326

85

AN5-36A

Purchased

No

250

Each

44.0000

2

4

AN5-36A******

Bolt

LocationLoc QtyLoc Code

ST336

44

m137963

44

Picklist Print

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Page 3

Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

D3065-041

Manufactured No

180

Each

27.0000

1

2

D3065-041

Step Leg Assembly

**

x1

Location

Loc Qty

Loc Code

WA002

27

162415

2

164384

1

165204

14

165610

10

x1 SL 2017-9-21

D3066-1

Manufactured No

180

Each

93.0000

2

4

D3066-1

Spacer

**

Location

Loc Qty

Loc Code

WA003

93

159117

4

162500

10

165744

79

x2 SL 2017-9-21

D3067-1

Manufactured No

110

Each

94.0000

1

2

D3067-1

End Plate

**

Location

Loc Qty

Loc Code

WA003

94

163742

6

165725

56

166077

32

x1 SL 2017-9-21

Picklist Print

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Page 4

Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Acracruz Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

D3067-1

Manufactured No

180

Each

94.0000

1

2

D3067-1

End Plate

Location

Loc Qty

Loc Code

WA003

94

163742

6

165725

56

166077

32

D3219-1

Manufactured No

110

Each

64.0000

2

4

D3219-1

Plate

x4 S.L 2017.9.19

Location

Loc Qty

Loc Code

WA003

64

162848

2

166070

20

166284

42

D3235-1

Manufactured No

250

Each

51.0000

2

4

D3235-1

Mounting Lug

Location

Loc Qty

Loc Code

ST522

51

162757

51

D3272-1

Manufactured No

110

Each

13.0000

1

2

D3272-1

Step

x2 S.L 2017.9.18

Location

Loc Qty

Loc Code

WA003

13

164968

1

165582

10

166023

2

B16372

x2

Picklist Print

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Page 5

Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

D3278-041

Manufactured No

250

Each

47.0000

1

2

D3278-041

Support Assembly

Location

Loc Qty

Loc Code

ST522

47

160701

2

162850

1

164347

20

165569

24

MS20600-AD4W4

Purchased No

180

Each

1,197.000

16

32

MS20600-AD4W4

Rivet

Location

Loc Qty

Loc Code

ST308

29

M138209

29

WA003

1168

M135442

204

M136986

108

M137412

63

M137820

21

M138209

81

M138441

691

Picklist Print

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Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

MS21042L3

Purchased

No

250

Each

1,481.000

2

4

MS21042L3

Nut

Location

Loc Qty

Loc Code

FP001

44

m135945

44

GA

308

m134360

102

M136665

206

OVER007

500

m138408

500

ST303

629

m137495

12

m138230

500

m138326

117

MS21042L4

Purchased

No

250

Each

1,772.000

8

16

MS21042L4

Nut

Location

Loc Qty

Loc Code

FP001

10

m133363

10

OVER007

500

m138230

500

ST303

1262

m138170

500

m138326

762

Picklist Print

Monday, September 18, 2017 4:04:44 PM

Page 7

Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

MS21042L5 Purchased No 250 Each 353.0000 2 4

MS21042L5

Nut

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	8	
m127813	8	
ST303	345	
m137963	45	
m138209	200	
m138336	100	

NAS1149D0363J Purchased No 250 Each 1,195.000 4 8

NAS1149D0363.J

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	408	
m137963	408	
ST263	787	
m138336	787	

NAS1149D0463J Purchased No 250 Each 1,758.000 16 32

NAS1149D0463.J

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	445	
M135056	40	
M137699	405	
Return2017	16	
M136665	16	
ST263	1297	
M137988	600	
M138230	697	

Picklist Print

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Work Order ID: 166371

166371

Parent Item: D350-591-311

D350-591-311

Parent Item Name: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 9/18/2017

Required Date: 9/28/2017

Start Qty: 2.00

Required Qty: 2.00

NAS1149D0563J

Purchased

No

250

Each

1,286.000

4

8

NAS1149D0563.J

Washer

Location

Loc Qty

Loc Code

GA

36

m135774

36

ST263

1250

m138040

550

m138209

700



DESIGN <i>GP</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG SCALE NTS	
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED

07.06.04 *[Signature]*



QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

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UNCONTROLLED COPY
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WITHOUT NOTICE
WORK ORDER
NO. 160371

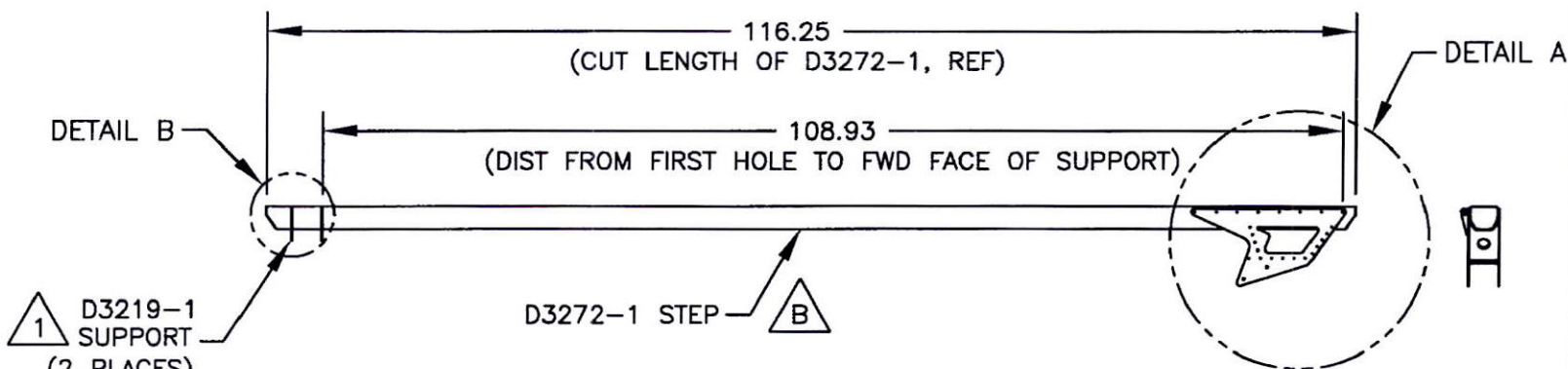
LM SEP 18 2017

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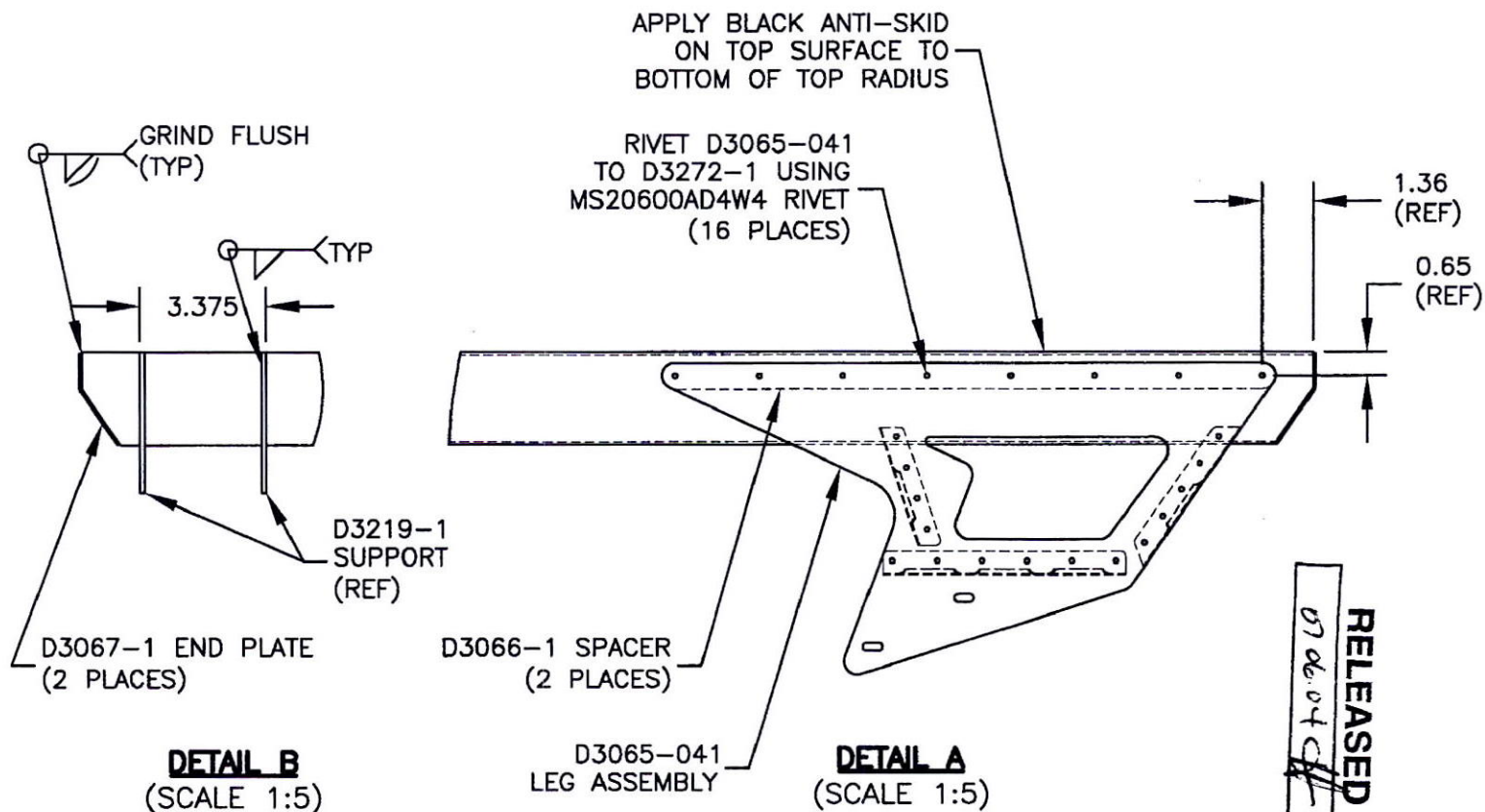
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DART

DESIGN	90	DRAWN BY	90	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	CE	APPROVED	CE	REV. B
DATE	07.05.18	TITLE	STEP ASSEMBLY, HI LONG	SHEET 2 OF 3
				SCALE 1:20



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)



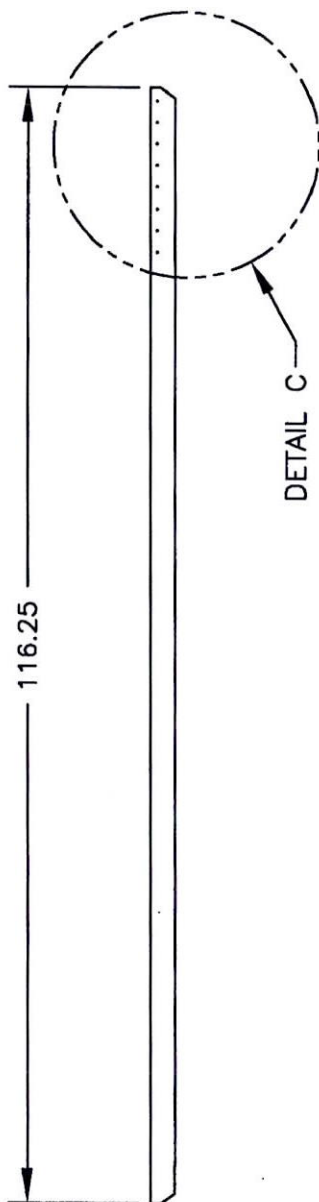
RELEASED
07.06.04



DESIGN 9P	DRAWN BY JB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED [Signature]	DRAWING NO. D3272	REV: B SHEET 3 OF 3
DATE 07.05.18	TITLE STEP ASSEMBLY, HI LONG		SCALE 1:20

RELEASED

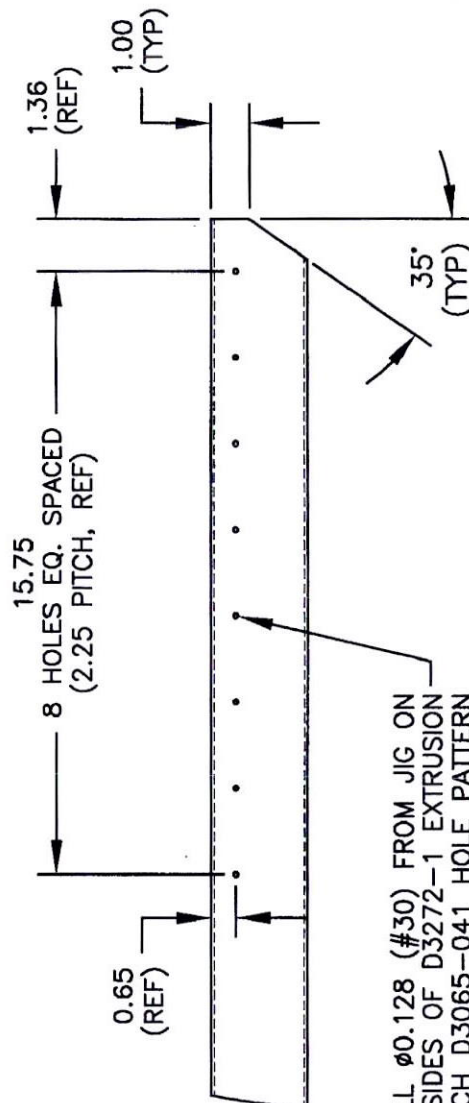
07.06.04 [Signature]



DETAIL C

B D3272-1 STEP

(MAKE FROM D2622-120 STEP EXTRUSION)



DRILL $\phi 0.128$ (#30) FROM JIG ON BOTH SIDES OF D3272-1 EXTRUSION TO MATCH D3065-041 HOLE PATTERN

DETAIL C
(SCALE 1:5)

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Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X						D350-591-213	Hel-Access-Step™, Short Step – High Skid, LH
	X					D350-591-214	Hel-Access-Step™, Short Step – High Skid, RH
		X				D350-591-215	Hel-Access-Step™, Short Step – Low Skid, LH
			X			D350-591-216	Hel-Access-Step™, Short Step – Low Skid, RH
				X		D350-591-311	Hel-Access-Step™, Long Step – High Skid, LH
					X	D350-591-312	Hel-Access-Step™, Long Step – High Skid, RH
1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
				1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
					1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
2	2	2	2	4	4	D2230-3	MOUNTING LUG
2	2	2	2	2	2	D2618	BUSHING
4	4	4	4			D2732-030	CUSHION
				2	2	D2856-400-720	ABRASION STRIP
2	2	2	2	2	2	D3235-1	MOUNTING LUG
				1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	AN3-35A	BOLT
				8	8	AN4-13A	BOLT
4	4	4	4			AN4-15A	BOLT
2	2	2	2	2	2	AN5-36A	BOLT
4	4	4	4	4	4	NAS1149D0363J	WASHER (AN960JD10)
12	12	12	12	16	16	NAS1149D0463J	WASHER (AN960JD416)
4	4	4	4	4	4	NAS1149D0563J	WASHER (AN960JD516)
2	2	2	2	2	2	MS21042L3	NUT
8	6	6	6	8	8	MS21042L4	NUT
2	2	2	2	2	2	MS21042L5	NUT
				1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 15 for installation of the DSI 9410-011 Kit.



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Inventory

Operation Number	Operation	Serial Number	Job	Quantity	Weight	Original Serial Number	Location	Container	Status	Added	Special Comments	Label	Supplier	Change No
Part Number: D3235-1 Revision: Mounting Lug														
190	QC21-SA	S018849	166371	2 Ea	0	162757	ST001	Bin	Stock	12/7/2017	*			
Operation Totals:		1		2	0									
Part Totals:		1		2	0									
Part Number: D350-591-311 Revision: Heli-Access-Step™ LH - High Gear, Long Step, Aerazur Float Compatible														
280	QC21-FG	S014335	166371	1 Ea	0	S014335	FG084	Bin	Stock	11/27/2017	Issue Container			CHG001
Operation Totals:		1		1	0									
Part Totals:		1		1	0									
Totals:		2		3	0									

Plex 1/8/2018 1:13 PM Dart.Boucher.Sylvie